

Winning at the NIH: Swimming with the Sharks

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FIVE TAKE AWAYS

- ✓ **The NIH is not one organization, but 27 individual fiefdoms, each with a culture and set of practices. Find your niche.**
- ✓ **In tight budget times, folks hunker down. Conservatism rules, but reviewers and staff are eager to be “wowed”.**
- ✓ **NIH has many ways to support your science (e.g. types of grants) and many portals to access that support (e.g. FOAs).**
- ✓ **Evaluations and scores drive selection processes, but human beings make decisions. Program Directors (and others) can help you understand the system and present your ideas in the best light.**
- ✓ **Check web sites to get started. Do some homework before firing off an e-mail or picking up the phone.**

TODAY'S TOPICS

■ **Understanding the NIH Culture**

- The Perfect Application
- NIH and Federally Supported Science
- Resource Allocation

■ **News You Can Use**

- It's All (well, mostly) About Grants
- Award Mechanisms and Activity Codes
- NIH Priorities Drive New Initiatives

■ **Resources**

- Is NIH interested in my science?
- Finding the Best Review Committee
- The Right Help at the Right Time



... improving health by leading the development and accelerating the application of biomedical technologies



Understand the NIH Culture

- The Perfect Application
- NIH and Federally Supported Science
- Resource Allocation



... improving health by leading the development and accelerating the application of biomedical technologies

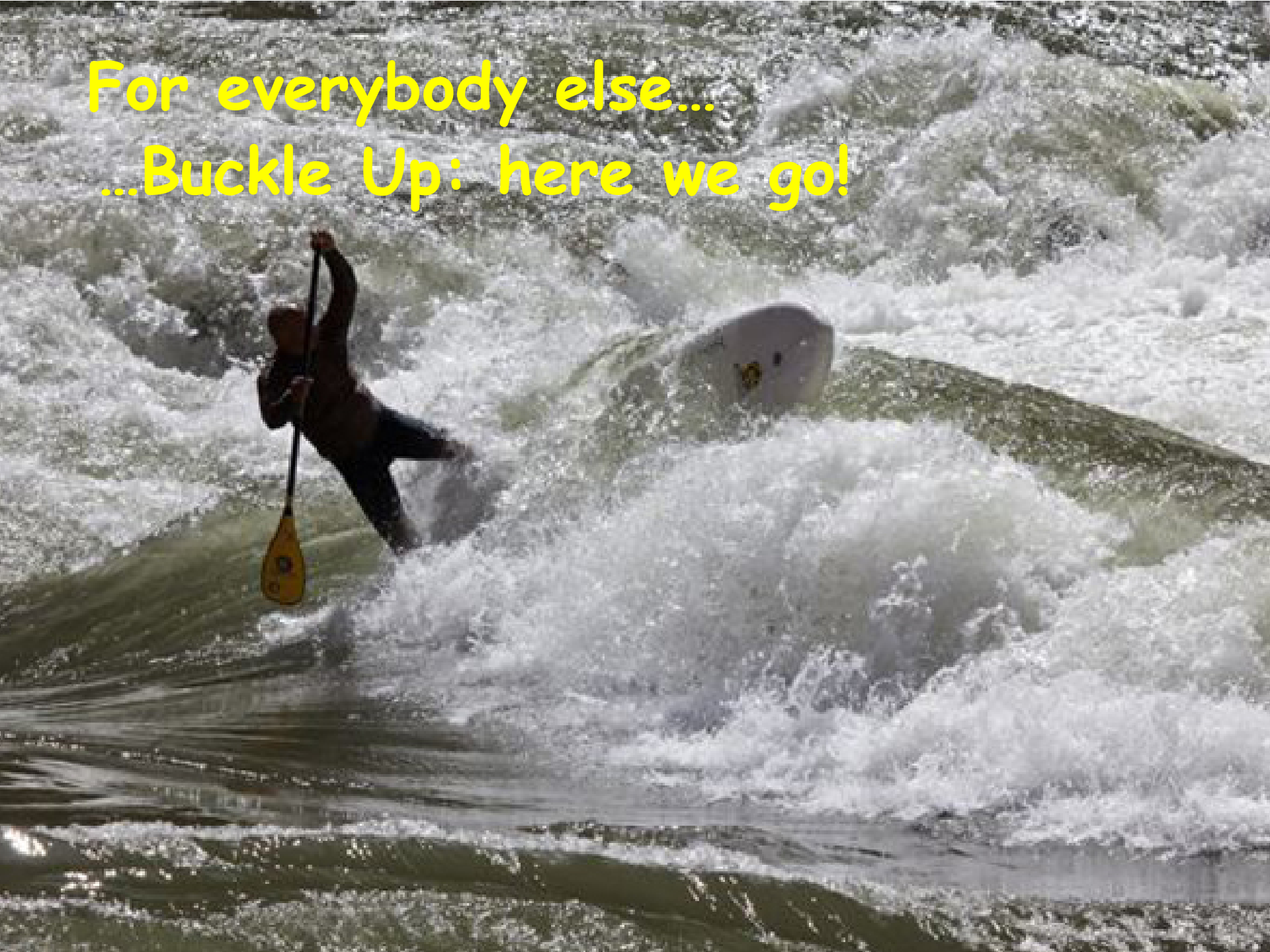


I don't need help if I have...

- ✓ A great idea to solve a **significant** biomedical problem
- ✓ An **innovative** solution
- ✓ The tools to get the job done
 - right **team**
 - right **resources**
 - enough data to support feasibility
- ✓ Outlined the **path** to get there
- ✓ A compelling application written to the instructions
 - following the format
 - including all administrative requirements
- ✓ Successfully posted the application through grants.gov



For everybody else...
...Buckle Up: here we go!



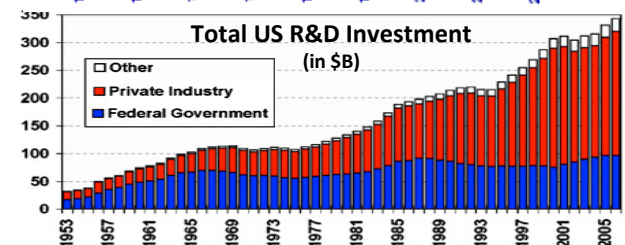
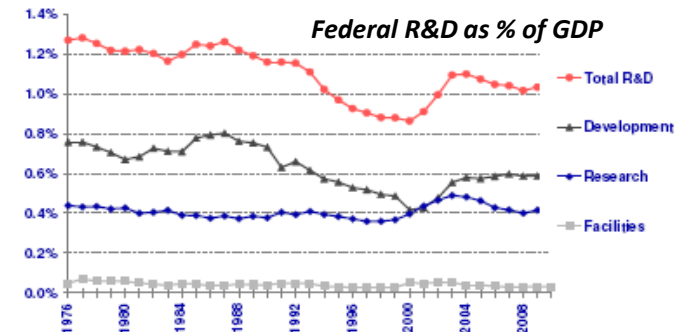
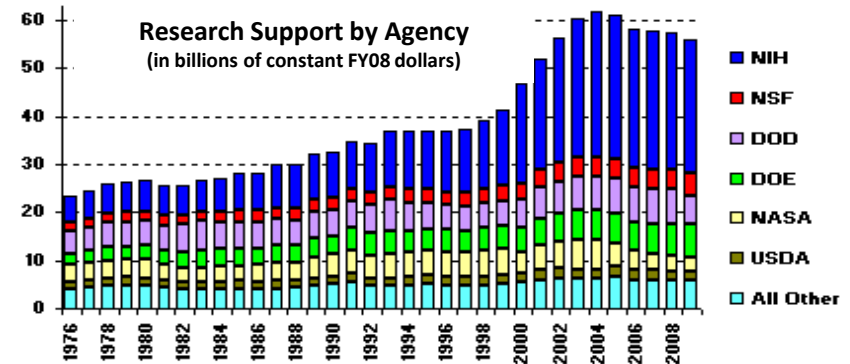
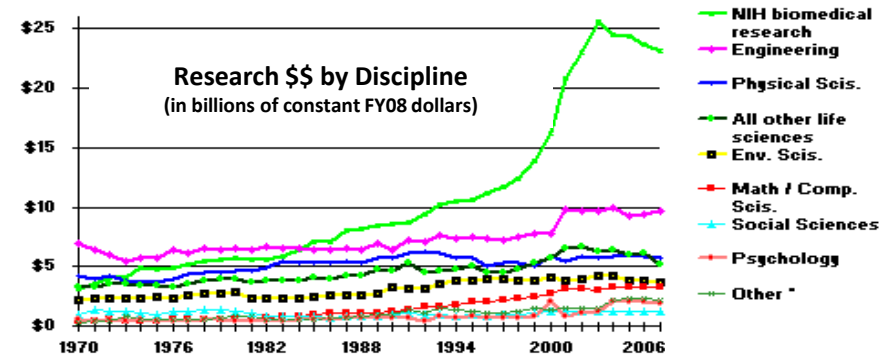
Federal Agencies in Science and Technology have **different**

- ✓ missions
- ✓ cultures
- ✓ rules
- ✓ levels of support
- ✓ expectations



But the **same** overall goal

- ✓ protect the security, health, and well being of Americans
- ✓ maintain knowledge and application superiority
- ✓ fuel the engine of US economic growth



NIH is the nation's **medical research agency** -- supporting scientific studies that **turn discovery into health.**

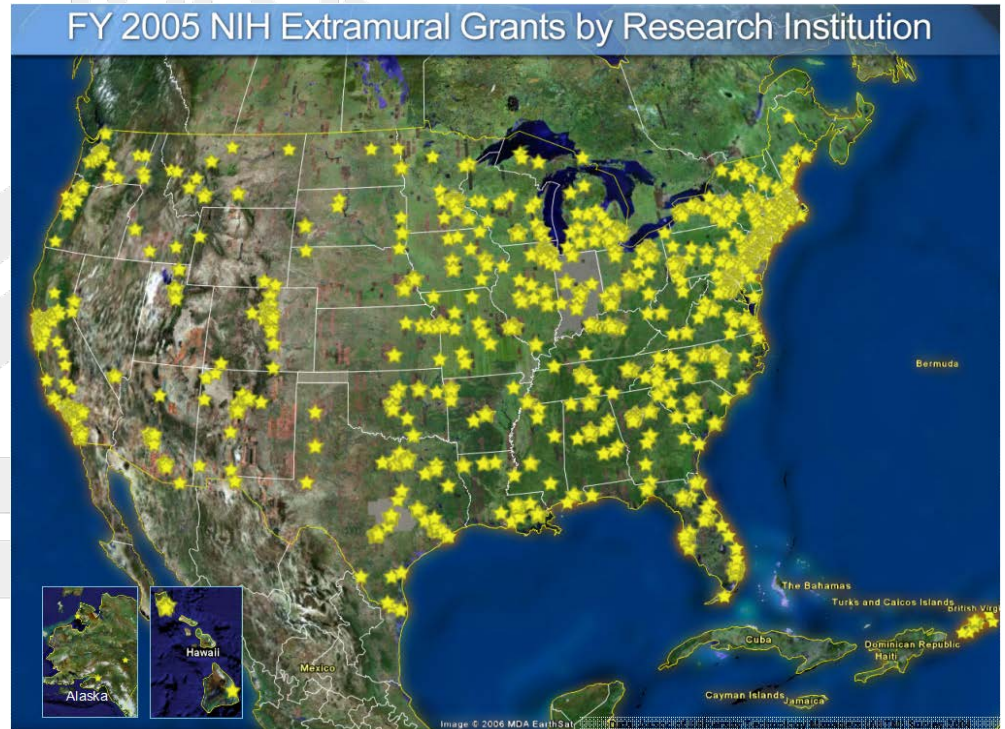


The Broad Reach of the NIH



NIH *is* an institution
(Intramural Research)

~ 6,000 scientists
~ 10% of NIH budget

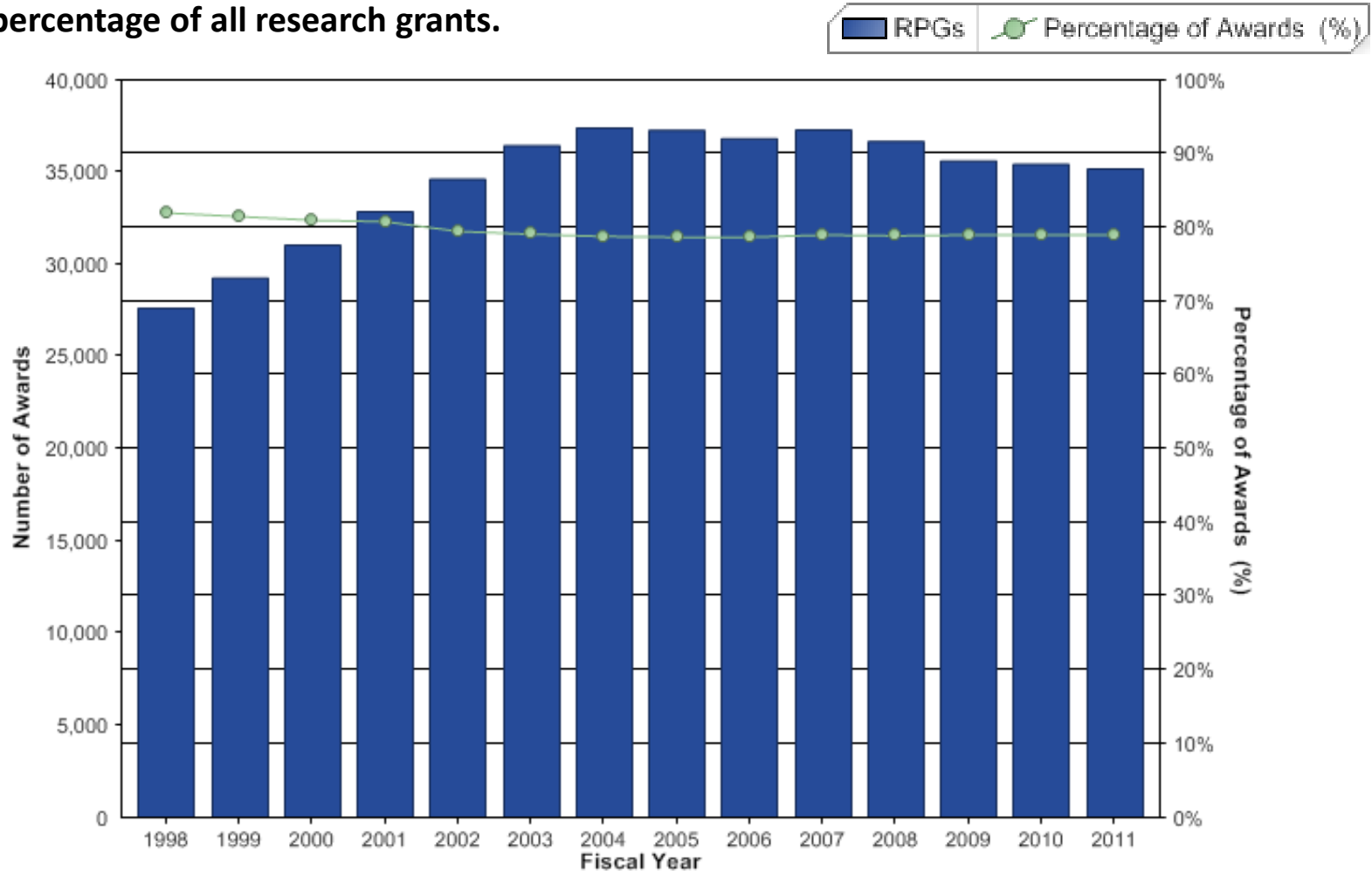


NIH *supports* institutions & people
(Extramural Research)

> 4,000 institutions
> 300,000 scientists & research personnel
~ 85% of the NIH budget

Research Project Grants (RPGs): The Mainstay of NIH Sponsored Research

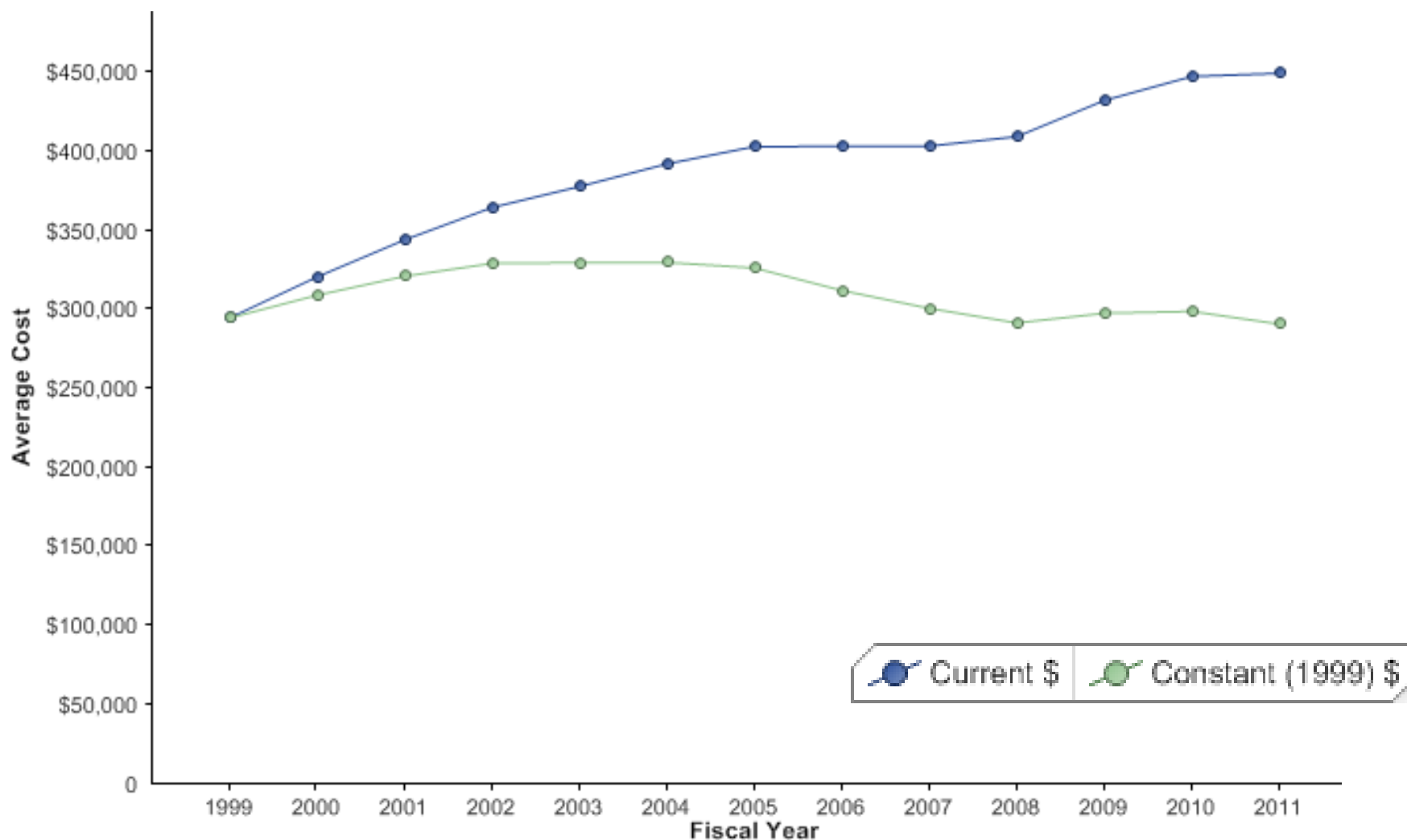
Awards as percentage of all research grants.



Research Project Grants (RPGs) include R00, R01, R03, R15, R21, R22, R23, R29, R33, R34, R35, R36, R37, R55, R56, RL1, RL5, RL9, P01, P42, PN1, UC1, UC7, U01, U19, U34, DP1, DP2, RL1, RL2, RL5, RL9.

More info available at: <http://www.report.nih.gov>

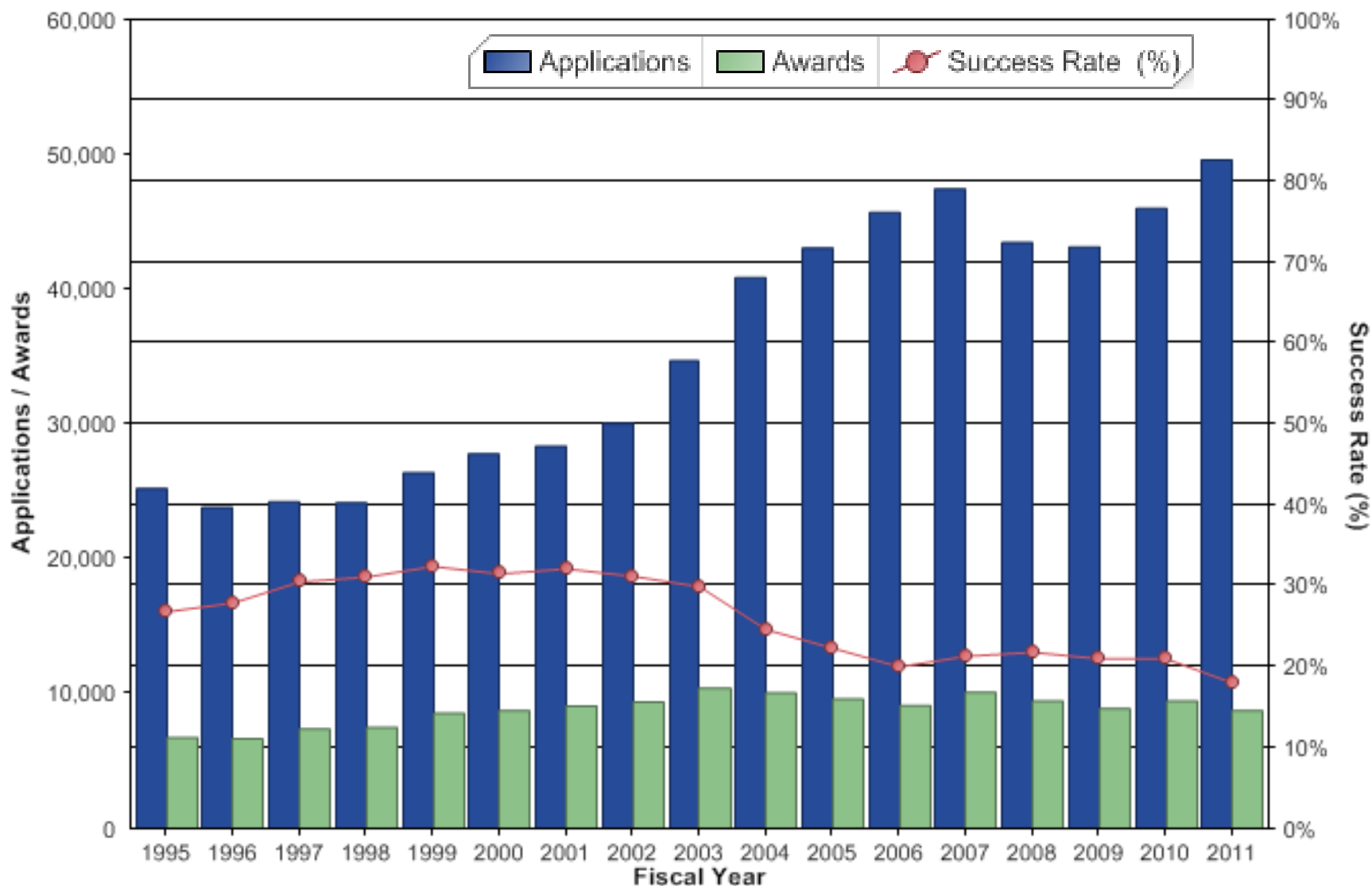
Research Project Grants (RPGs) Size



• Research Project Grants (RPGs) include R00, R01, R03, R15, R21, R22, R23, R29, R33, R34, R35, R36, R37, R55, R56, RL1, RL5, RL9, P01, P42, PN1, UC1, UC7, U01, U19, U34, DP1, DP2, RL1, RL2, RL5, RL9.

More info available at: <http://www.report.nih.gov>

Applications, Awards, Success Rates



More info available at: http://report.nih.gov/success_rates/index.aspx

NIH is organized into:

27 Institutes & Centers (IC) each with different:

- missions and priorities
- budgets
- ways of deciding which grants to fund

NIDCD
National Institute of
Deafness and
Communications Disorders

NIMHD
National Institute on Minority Health
and Health Disparities

NIAAA
National Institute on Alcohol
Abuse and Alcoholism

**National Heart
Lung and Blood Institute**

**National Institute
of Allergy and
Infectious Diseases**

**NATIONAL
CANCER
INSTITUTE**

FOGARTY
International Center

Eunice Kennedy Shriver
NICHHD
National Institute of Child Health
& Human Development

NIDA
NATIONAL INSTITUTE
ON DRUG ABUSE

NIEHS
National Institute of
Environmental Health Sciences

**National Eye
Institute**
NATIONAL INSTITUTES OF HEALTH

**National Institute of Dental
and Craniofacial Research**

**National Institute of
General Medical Sciences**

NIDDK
National Institute of Diabetes and
Digestive and Kidney Diseases

NCATS
Catalyzing
Innovation

**National Institute of
Biomedical Imaging
and Bioengineering**

NIAMS
National Institute of Arthritis and
Musculoskeletal and Skin Diseases

NIMH
National Institute
of Mental Health

**NATIONAL
LIBRARY OF
MEDICINE**

**National Human
Genome Research
Institute**

**NATIONAL INSTITUTE OF
NURSING
RESEARCH**

**NATIONAL INSTITUTE OF
NEUROLOGICAL
DISORDERS AND STROKE**

**center for
scientific review**

CIT
Center for Information Technology

Clinical Center

NACAM
NATIONAL CENTER FOR COMPLEMENTARY
AND ALTERNATIVE MEDICINE

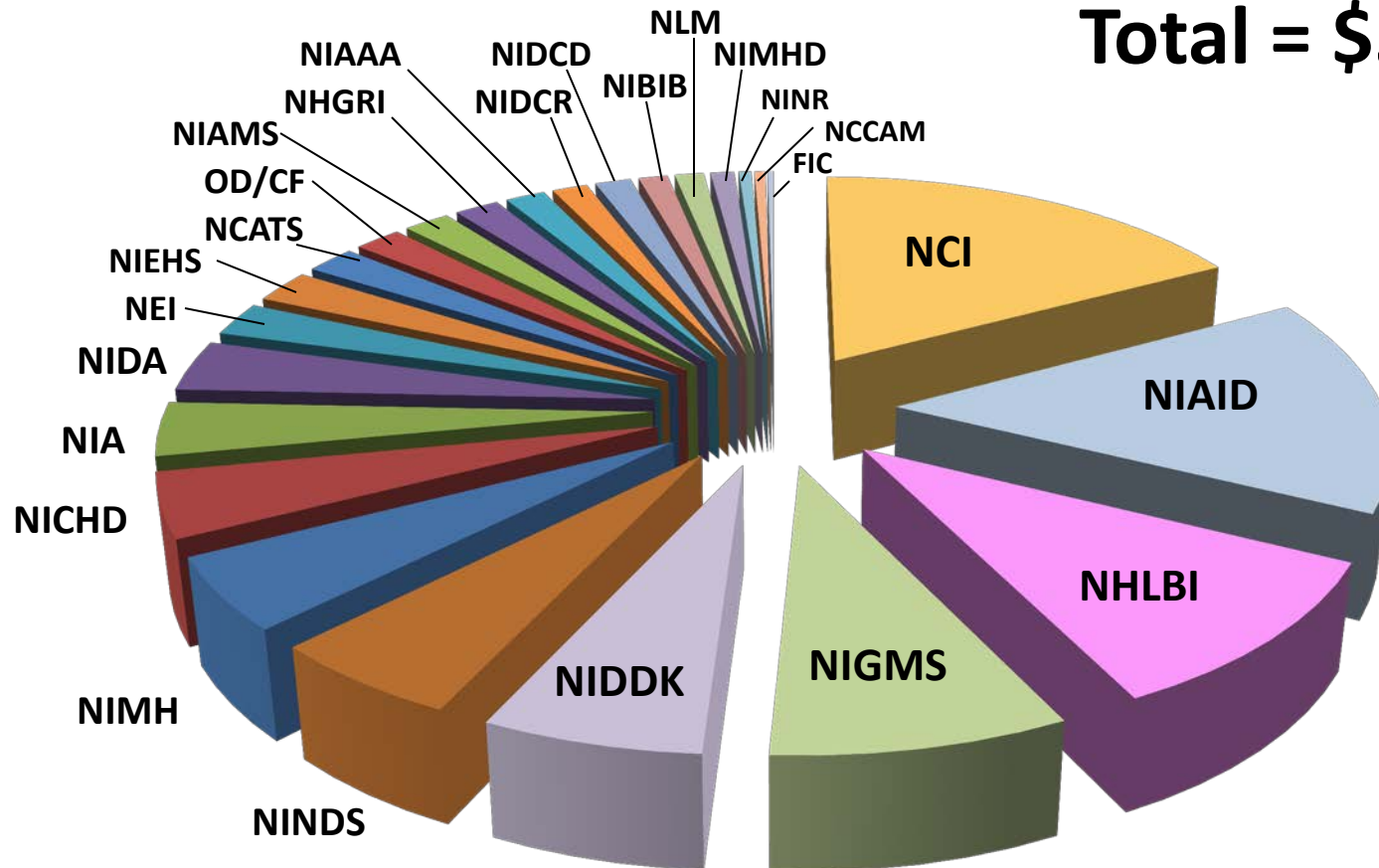
NATIONAL INSTITUTE ON AGING
National Institutes of Health

National Institutes of Health
**NATIONAL CENTER FOR ADVANCING
TRANSLATIONAL SCIENCES**

NIH FY12 Budget

NIH Divides most of its investment according to the interests of the component parts (i.e. Institutes or Centers), with <4%) allocated to trans-NIH initiatives.

Total = \$30.9 B



About 85% distributed via Extramural grants, contracts, cooperative agreements

NIH Grant Statistics

Fiscal Year 2010

- **88,000** applications received; **62,000** reviewed
- **240** Review Officers organized **1,600** meetings with **18,000** reviewers
- **16,600+** new research grants awarded

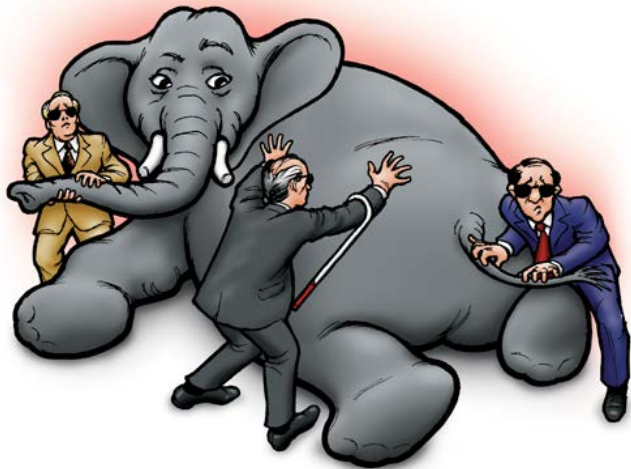
Some Outcomes

NIH-funded research has produced

- **70%** of major drugs
- **80%** of Nobel Prizes



NIH's support for biomedical research is...



- highly complex
- confusing
- difficult to navigate
- often frustrating
- unpredictable

- robust
- flexible
- broad
- timely
- reliable



News You Can Use

- It's All (well, mostly) About Grants
- Award Mechanisms and Activity Codes
- NIH Priorities Drive New Initiatives



... improving health by leading the development and accelerating the application of biomedical technologies



What's the Difference Between Grants and Contracts?

GRANT

- **Assistance**
- **Government is Patron or Partner**
- **Purpose: support and stimulate research**
- **Benefit a public purpose**
- **Investigator initiated**

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CONTRACT

- **Acquisition**
- **Government is Purchaser**
- **Purpose: acquire goods or services**
- **Benefit and use of the government**
- **Government initiated**

How Does NIH Solicit Applications?

- **Federal Opportunity Announcements (FOA)** published through
 - the NIH Guide (<http://grants.nih.gov/grants/guide/>)
 - grants.gov
- **Parent Announcements cover basic activity codes**
 - investigator-initiated applications
- **Special Opportunities to fill gaps**
 - **Requests for Applications (RFA)**, a one-time call with set aside funds
 - **Program Announcement (PA)** highlights areas of focus
 - **Program Announcement with Special Review (PAR)** for special consideration and “protected” review
 - **Program Announcement with Set Aside (PAS)** essentially, an RFA with multiple receipt dates



All Grant Solicitations are Listed in the NIH Guide



U.S. Department of Health & Human Services

www.hhs.gov

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Home | About Grants | **Funding** | Forms & Deadlines | Grants Policy | News & Events | About OER | NIH Home

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Funding Opportunities (RFAs, PAs) & Notices

Unsolicited Applications (Parent Announcements)

Research Training & Career Development

Small Business (SBIR/STTR)

Contract Opportunities

NIH-Wide Initiatives

New and Early Stage Investigators

Stem Cell Information

NIH Common Fund

OppNet (Behavioral &

Description of the NIH Guide for Grants and Contracts

The **NIH Guide for Grants and Contracts** is the official publication for grant policies, guidelines and funding opportunities.

NIH Guide announcements (PAs, RFAs and Notices) are published weekly. See below for announcement type. At the end of each work week (usually on Friday afternoon), NIH transmits an e-mail to the NIH Guide LISTSERV (see [Subscribe/Unsubscribe](#) instructions) with a **Current Weekly Table of Contents (TOC)**, including links to announcements published during the week. See the [January 13, 2005 NIH Guide Notice](#) for information on searching the NIH Guide and on Expiration Dates. The NIH Guide is also used by [NIH Contracting offices](#) and other HHS agencies, to announce their funding opportunities. The NIH Guide serves in lieu of the Federal Register, in compliance with the Administrative Procedures Act. Occasionally, unofficial notices of interest to the scientific research community are published. The NIH considers applications for the support of basic or clinical biomedical, behavioral, and bioengineering research. New extramural grant programs and priorities are implemented by publication of one of the following:

Funding Opportunity Announcement (FOA)

A publicly available document by which a Federal agency makes known its intentions to award discretionary grants or cooperative agreements, usually as a result of competition for funds. Funding

Sign up for weekly updates

<http://grants.nih.gov/grants/guide/index.html>

NIH GRANTS Support Science



U.S. Department of Health & Human Services



Office of
Extramural Research
National Institutes of Health



The only* way to
apply for NIH funding

* very few exceptions

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Electronic Grants

Applying Electronically

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Apply &
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Opportunity &
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Application
Package](#)

[Prepare
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[Submit, Track
& View
Application](#)

[Avoiding
Common Errors](#)

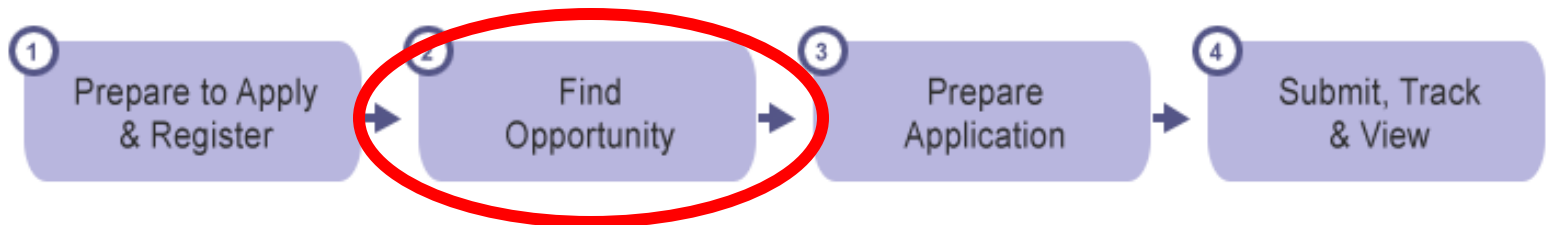
[Frequently](#)

Applying Electronically

Most competing grant applications to NIH require electronic submission. Organizations submit applications via [Grants.gov](#), the online portal to find and apply for grants across all Federal agencies. Applicants must follow the application through to the [eRA Commons](#), NIH's electronic system for grants administration, to complete the submission process. If you can't view the application in the Commons, we can't review it!

i Important Reminder: Organizations must register in both Grants.gov and eRA Commons to apply for most NIH grants. Registration can take four weeks or more to complete. [Start now!](#)

Electronic Application Process



[Process Overview](#)

[History of move from paper to electronic applications \(PDF - 31 KB\)](#)

<http://grants.nih.gov/grants/ElectronicReceipt/index.htm>

Follow the breadcrumbs...

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Funding Opportunities and Notices

The **NIH Guide for Grants and Contracts** is the official publication for NIH medical and behavioral research grant policies, guidelines and funding opportunities. [Definitions and More Information...](#)

Search the NIH Guide for:

- ☒ [Active RFAs](#) (Requests for Applications)
- ☒ [Active PAS](#) (Program Announcements)
- ☐ [Recent Notices](#) (Released in Last 12 Months)

[Inactive & Active Announcements \(use Advanced Search\)](#) [Search Help](#)

With Announcement # or Keywords: (Optional) [Search](#) [Advanced Search](#)

Browse Active Funding Opportunities

- [Requests for Applications \(RFAs\)](#)
- [Program Announcements \(PAs\)](#)

Browse Recent Policies and Guidelines

- [Notices](#) (Released in last 12 months)

Related Resources

- [Grant Application Basics](#)
- [Grants Process Overview](#)
- [Submitting Your Application](#)
- [Applying Electronically](#)
- [Electronic Research Admin \(eRA Commons\)](#)
- [NIH Financial Operations \(w/Funding Strategies\)](#)
- [Archive of Selected Policy Notices \(1993 - Present\)](#)
- [Related Archives](#)


Funding Opportunities
Funding Opportunities (RFAs, PAs) & Notices
Unsolicited Applications (Parent Announcements)
Research Training & Career Development
Small Business (SBIR/STTR)
Contract Opportunities


NIH-Wide Initiatives
New and Early Stage Investigators
Stem Cell Information
NIH Common Fund
OppNet (Behavioral & Social Sciences)

Award Data
NIH Reports (RePORT)
Search NIH Awards

<http://grants.nih.gov/grants/guide/index.html>

List of Current Solicitations


U.S. Department of Health & Human Services


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[Home](#) | [About Grants](#) | **Funding** | [Forms & Deadlines](#) | [Grants Policy](#) | [News & Events](#) | [About OER](#) | [NIH Home](#)

Funding Opportunities & Notices Search Results

All Active Requests for Applications (RFAs)

Related Links:

Search within Results Below:

[Search](#)

Scroll down and click on the appropriate Funding Announcement

Matching Records: 103

Sorted by: Release Date (Desc)

Announcement Number	Related Announc.	Issuing Organization	Release Date	Expiration Date (R24 Only) ?	Expiration Date	Activity Code(s)	Title
RFA-HD-12-203	See Related	NICHD	01/24/2012	n/a	04/12/2012	R24	Learning Disabilities Innovation Hubs (R24)
RFA-RM-11-021	See Related	Roadmap	01/24/2012	n/a	04/28/2012	U54	NIH Health Care Systems Research Collaboratory - Coordinating Center (U54)
RFA-RM-12-002	See Related	Roadmap	01/24/2012	04/02/2012	05/03/2012	UH2/UH3	NIH Health Care Systems Research Collaboratory - Pragmatic Clinical Trials Demonstration Projects (UH2/UH3)

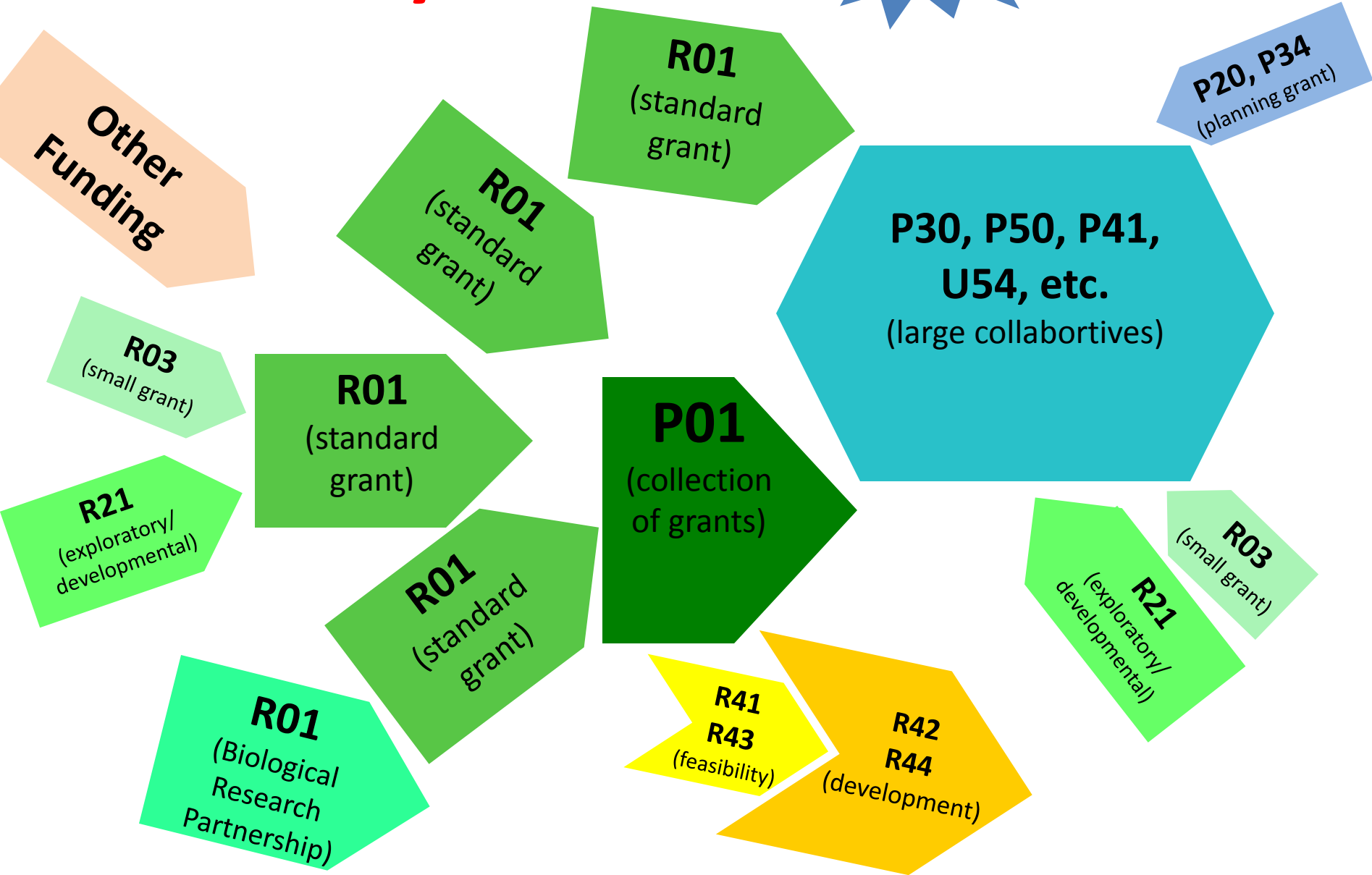
All the Relevant Details are in the FOA and Associated Documents

Department of Health and Human Services

Part 1. Overview Information

Participating Organization(s)	National Institutes of Health (NIH)
Components of Participating Organizations	This Funding Opportunity Announcement (FOA) is developed as a Common Fund initiative (http://commonfund.nih.gov/) through the NIH Office of the Director, Office of Strategic Coordination (http://dpcpsi.nih.gov/osc/). The FOA will be administered by a trans-NIH team led by the National Institute of Neurological Disorders and Stroke (NINDS) (http://www.ninds.nih.gov/) on behalf of the NIH Common Fund Program on Advancing Regulatory Science http://commonfund.nih.gov/regulatoryscience/ .
Funding Opportunity Title	Integrated Microphysiological Systems for Drug Efficacy and Toxicity Testing in Human Health and Disease (UH2/UH3)
Activity Code	UH2/UH3 Phase Innovation Awards Cooperative Agreement
Announcement Type	New
Related Notices	U18, RFA-RM-12-001 <ul style="list-style-type: none">• December 5, 2011 - See Notice NOT-RM-12-007. The National Institutes of Health (NIH) Common Fund (CF) Regulatory Science Microsystems Program Team will hold a pre-application teleconference.
Funding Opportunity Announcement (FOA) Number	RFA-RM-11-022
Companion FOA	None
Number of Applications	See Section III. 3. Additional Information on Eligibility .
Catalog of Federal	93.310

“Family Tree” for Many Grants



Different Grants Serve Different Purposes

■ R01

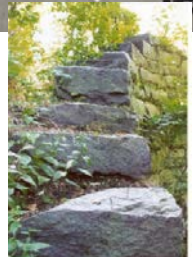
- Workhorse of NIH research, highly valued by peers
- An outline for rigorous investigation, provides new fulcrum for the field without gaps for others to fill
- Based on solid preliminary data
- 4-5 years, often renewable, generally \$400-\$500K per year

■ R03

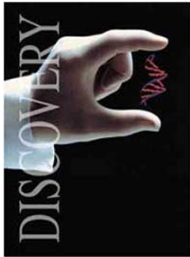
- A “mini-R01” popular with new investigators
- Self-contained: data analysis, pilots, methods development
- \$50K per year for two years
- Not used by all institutes.

■ R21 (Exploratory/Developmental)

- Ideal = High Risk/High Reward (HR²)
- Innovation is a key, no preliminary “required”
- \$275K per year, typically 2 years, NOT renewable
- Success = quantum leap requiring follow up (sometimes with an R33) and/or validation (i.e. an R01 submission)
- NOT a “new investigator starter grant”!



Small Business Innovation Research (SBIR) Small Business Technology Transfer (STTR) Programs

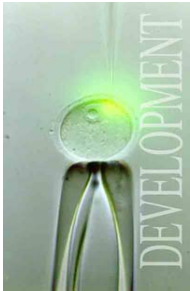


PHASE I – Feasibility Study

- Average award: \$170K
- Project period varies, most 6 – 12 months

R41 (STTR)

R43 (SBIR)

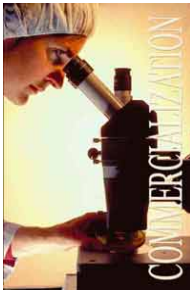


PHASE II – Full R&D

- Average \$850K, 2 years but some longer
- Commercialization plan required

R42 (STTR)

R44 (SBIR)



PHASE III – Commercialization

- Use of non-SBIR/STTR Funds
- Consider exit strategy

Policies for New and Early Stage Investigators



'LOOK, CAPTAIN: A NEWBIE!'

- Payline for new and early stage investigators (NI/ESI) for R01 applications can be up to 5 percentile points beyond the regular Institute payline.
- One year of bridge funding for new investigators submitting the first R01 competitive renewal scoring close to the payline.

New Investigator (NI) – Applicant has not previously been a PD/PI on a significant NIH independent research award.

Early-Stage Investigator (ESI) - New Investigator within 10 yrs of completing their terminal degree or medical residency.



Peer reviewers will focus more on the approach of early-stage investigators than their track record and expect less preliminary data

NIH Director's Early Independence Awards (DP5)

Exceptional junior scientists who will obtain their PhD within one year or who have obtained their PhD in the last year



- Skip postdoctoral training
- Directly launch an independent research program
- Highly competitive (10 awards in Fall 2011)

This year's deadline: January 30, 2012

<http://grants.nih.gov/grants/guide/rfa-files/RFA-RM-11-007.html>



Pathway to Independence Program (K99/R00)

- ✓ US citizen/permanent residents or non-citizens on visas
- ✓ No more than 5 years of postdoctoral experience
- ✓ Must be in dependent position
- ✓ Standard application dates apply
- ✓ Trans-NIH (all ICs participate)

K99 Dependent Phase

- 1-2 yrs mentored postdoctoral support
- \$50K salary, \$20K research costs + 8% F&A

R00 Independent Phase

- 3 yrs -- contingent upon securing an independent research/faculty position
- \$249/yr total cost with full F&A

Research Training and Career Awards



- **Training Grants – *T***
 - Institutional
 - Predoctoral and Postdoctoral

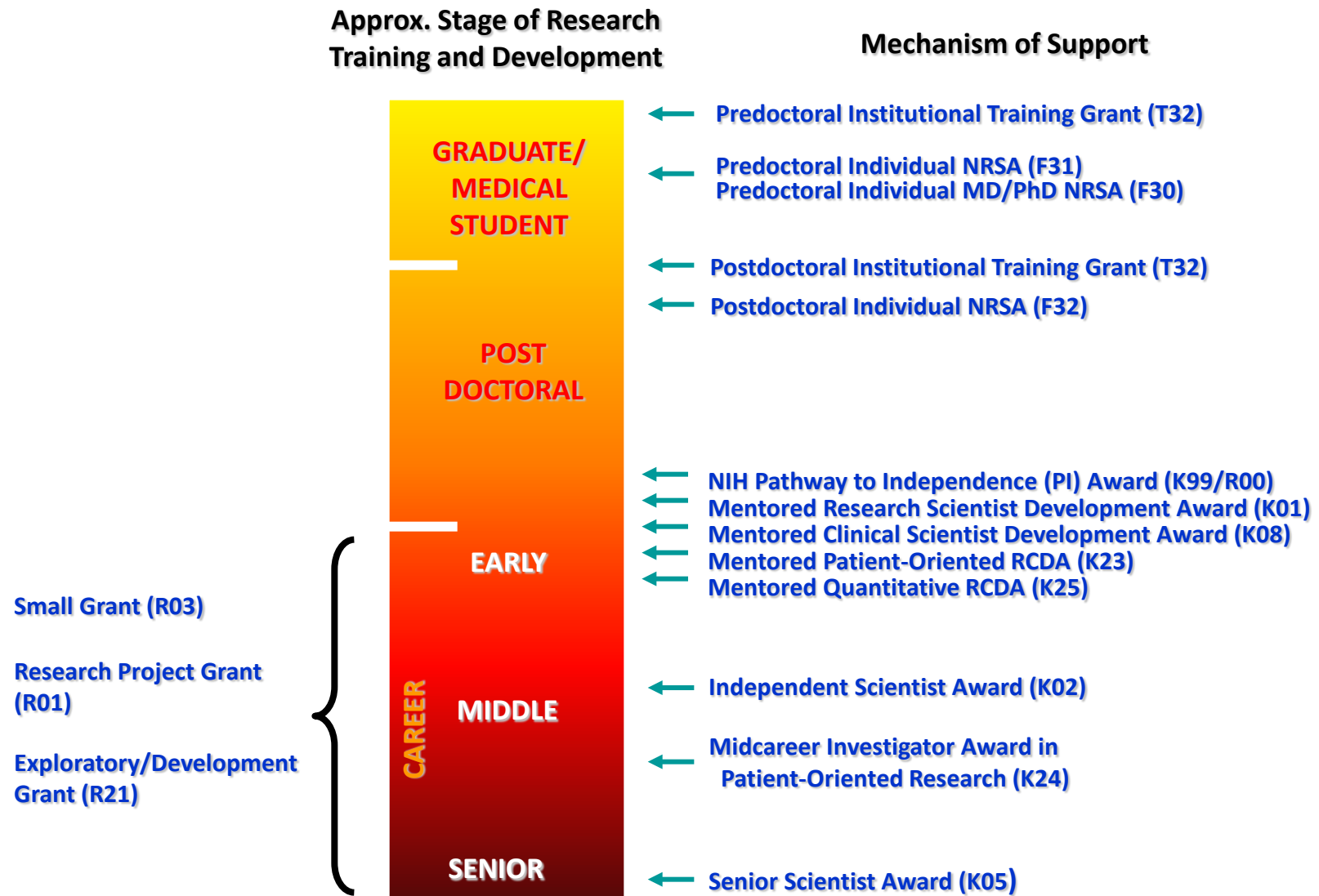


- **Fellowships – *F***
 - Individual
 - Predoctoral – F31
 - Postdoctoral – F32



- **Career Development Awards – *K***

NIH Funding Supports Scientists at Every Career Stage



Options for Career Development



U.S. Department of Health & Human Services

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[Funding Opportunities \(RFAs, PAs\) & Notices](#)

[Unsolicited Applications \(Parent Announcements\)](#)

[Research Training & Career Development](#)

[Extramural Training Mechanisms](#)

[Intramural](#)

[News](#)

[Career Resources](#)

[Q&A and FAQs](#)

[Small Business \(SBIR/STTR\)](#)

[Contract Opportunities](#)

NIH-Wide Initiatives

[New and Early Stage Investigators](#)

Extramural Training Mechanisms

- [Ruth L. Kirschstein National Research Service Awards \(NRSA\) Training Grants and Fellowships](#)
 - [Guide to Kirschstein-NRSA Programs](#)
 - [Institutional Research Training Grants](#)
 - [T Kiosk](#) - Information about NRSA Training Grants Funding Opportunities
 - [Individual Fellowships](#)
 - [F Kiosk](#) - Information about NRSA Fellowship Funding Opportunities
 - [Kirschstein-NRSA Policy Issues](#)
- [Non-NRSA Fellowships and Training Grants](#)
- [Career Development Awards](#)
 - [K Kiosk](#) - Information about NIH Career Development Awards
 - [Career Award Wizard](#)
 - [NIH Forms and Applications Page](#) (Including PHS [PHS 398](#) and [PHS 2590](#) application and other [Training Forms](#))

News Flash

Paid research experiences for students and science teachers available for this summer at research institutions across the country.

These opportunities are made available through American Recovery and Reinvestment Act (ARRA) funding.

See the [NIH ARRA Summer Research Experiences Web site](#) for details.

<http://grants.nih.gov/training/extramural.htm>

Looking to the Future with the NIH Director



National Institutes of Health
The Nation's Medical Research Agency

Strategic Priorities

- 1. High-throughput Technologies/Genomics**
- 2. Translational Medicine**
- 3. Science for Health Care Reform**
 - Comparative Effectiveness Research
 - Prevention and Personalized Medicine
- 4. Global Health**
- 5. Reinvigorating and Empowering the Biomedical Research Community**



Francis S. Collins,
M.D., Ph.D.



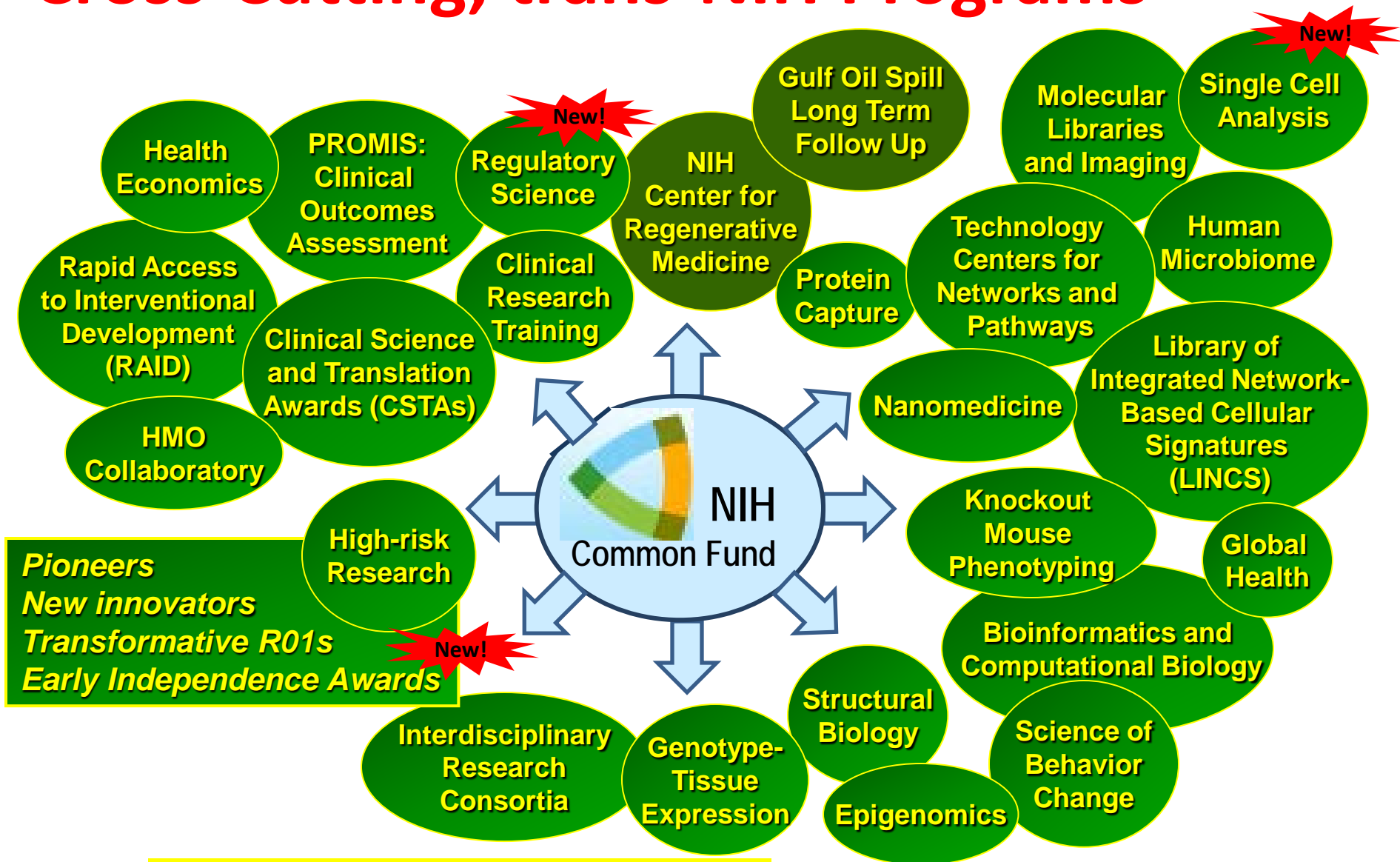
... improving health by leading the development and accelerating the application of biomedical technologies





**We're not
your
grandfather's
NIH!**

Cross-Cutting, trans-NIH Programs



<http://commonfund.nih.gov/>

Ongoing Investments in Innovation

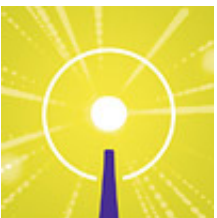
The NIH Common Fund invests millions of dollars to fund new high-risk research to explore ideas that have strong potential to improve health



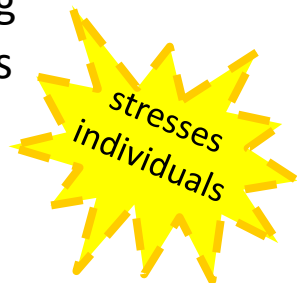
Transformative R01 Program places the emphasis on creative ideas—projects with the potential to overturn paradigms. Flexible budgets. (79 awards since 2009).



Pioneer Awards support individual scientists of exceptional creativity who propose pioneering approaches to major challenges in biomedical and behavioral research (111 awards since 2004).



New Innovator Program address two important goals: stimulating highly innovative research and supporting promising new investigators (214 awards since 2007).



Early Independence Program supports individuals with the intellect, scientific creativity, drive and maturity to flourish independently without the need for traditional post-doctoral training. (10 awards in 2011).

New!

<http://nihroadmap.nih.gov/>

NIH and Non-Hypothesis Driven Research

There are two kinds of scientific revolutions, those driven by new tools and those driven by new concepts... The effect of a concept-driven revolution is to explain old things in new ways. The effect of a tool-driven revolution is to discover new things that have to be explained.

-Freeman Dyson, 1997



Resources

- Is NIH interested in my science?
- Finding the Best Review Committee
- The Right Help at the Right Time

What Does NIH Already Support in My Interest Area?

NEWS UPDATES NEW
Tuesday, October 19, 2010
Release of **RePORTER** ver. 1.9: Enhancements Made to the RePORTER Tool
[more...](#)

RESEARCH PORTFOLIO ONLINE REPORTING TOOLS (RePORT)
In addition to carrying out its scientific mission, NIH exemplifies and promotes the highest level of public accountability. To that end, the Research Portfolio Online Reporting Tools provides access to reports, data, and analyses of NIH research activities, including information on NIH expenditures and the results of NIH-supported research.

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NIH Searchable Databases Contain Abstracts of All Funded Projects

U. S. Department of Health & Human Services

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Research Portfolio Online Reporting Tools (RePORT)
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Project Information [?]
5R01EB006365-10


PI PROFILE LINKS  [MORE INFO](#)

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DESCRIPTION DETAILS RESULTS HISTORY SUBPROJECTS SIMILAR PROJECTS ^{BETA} LINKS ^{BETA} NEWS AND MORE ^{BETA}

Project Number: 5R01EB006365-10 **Contact PI / Project Leader:** [LANGER, ROBERT SAMUEL](#)
Title: MICROCHIP DRUG DELIVERY SYSTEM **Awardee Organization:** MASSACHUSETTS INSTITUTE OF TECHNOLOGY

Contact PI / Project Leader Information:  **Program Official Information:** **Other PI Information:**  Profile Ex...

Name: [LANGER, ROBERT SAMUEL](#)  **Name:** ZULLO, STEVEN J
Email: [Click to view Contact PI / Project Leader email address](#) **Email:** [Click to view PO email address](#)
Title: INSTITUTE PROFESSOR

Organization: **Department/ Educational Institution Type:** **Congressional District:**

Name: MASSACHUSETTS INSTITUTE OF TECHNOLOGY **ENGINEERING (ALL TYPES)** **State Code:** MA
City: CAMBRIDGE **Country:** UNITED STATES (US) **BIOMED ENGR/COL ENGR/ENGR STA** **District:** 08

Other Information:

FOA: [PAR-06-153](#) **DUNS Number:** 001425594 **CFDA Code:** 28
Study Section: Gene and Drug Delivery Systems Study Section (GDD) **Project Start Date:** 30-SEP-1999 **Project End Date:** 31-DEC-2011
Fiscal Year: 2011 **Award Notice Date:** 25-JUL-2011 **Budget Start Date:** 1-AUG-2011 **Budget End Date:** 31-DEC-2011

Administering Institutes or Centers:
NATIONAL INSTITUTE OF BIOMEDICAL IMAGING AND BIOENGINEERING

Project Funding Information for 2011:

Total Funding: \$1,116,773

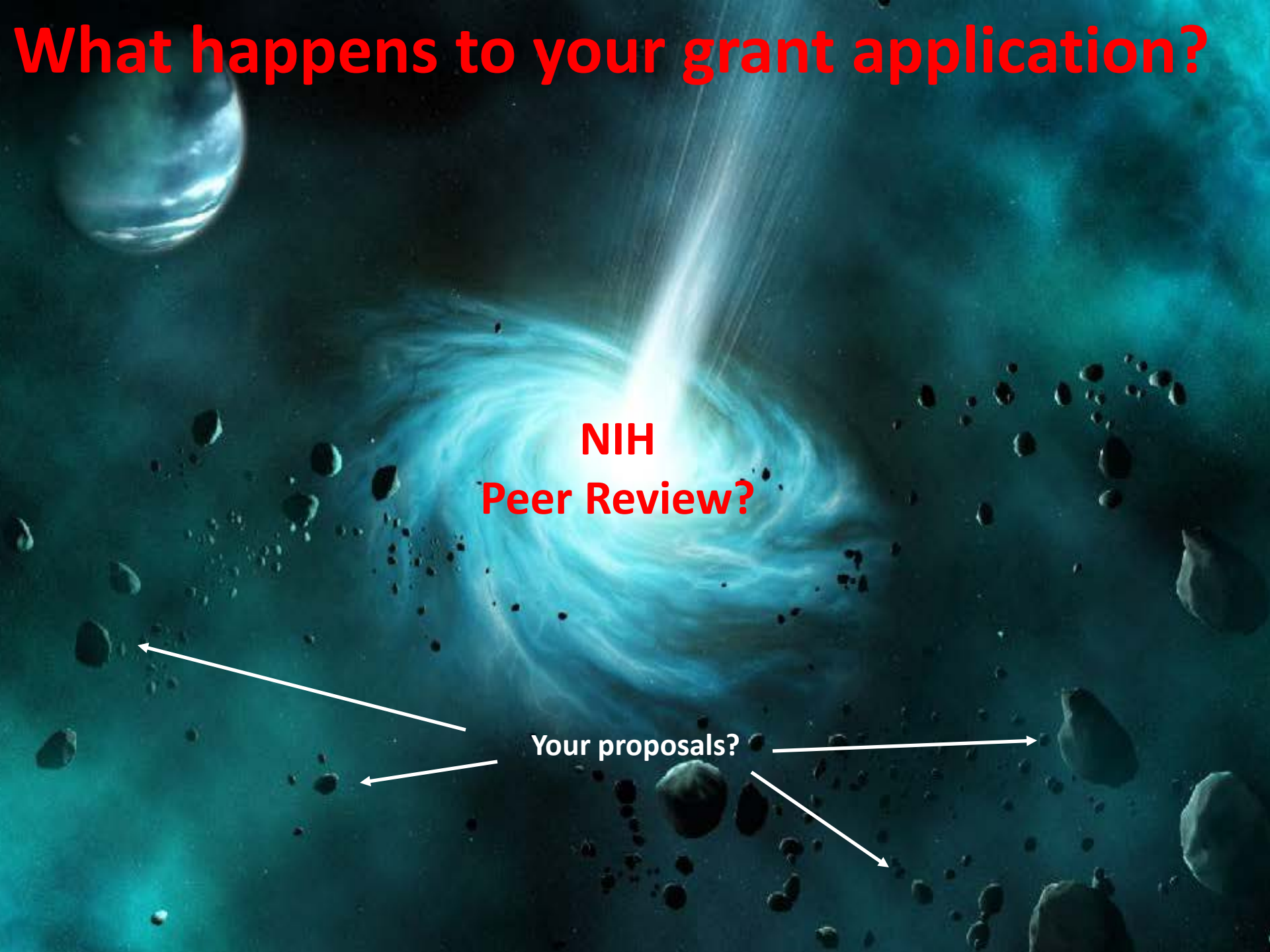
Year	Funding IC	FY Total Cost by IC
2011	NATIONAL INSTITUTE OF BIOMEDICAL IMAGING AND BIOENGINEERING	\$1,116,773

[HELP](#)

What happens to your grant application?

NIH
Peer Review?

Your proposals?





It's an orderly universe.

Your application is reviewed by either ...

- **Chartered (Standing) Scientific Review Group (SRG), or “Study Section”**
- **Special Emphasis Panel (SEP)**
 - **organized by the Center for Scientific Review (CSR)**
 - Conflicts on the panel (e.g. reviewer is a PI on the grant application)
 - Special review for a unique solicitation (e.g. PAR)
 - **convened within a home IC of a highly specific initiative (e.g. RFA)**

Peer Review and You



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Peer Review Policies & Practices

- On This Page:**
- [What's New in Peer Review](#)
 - [Information for Reviewers](#)
 - [Peer Review Practices and Policies](#)
 - [Peer Review Archive](#)

Overview of Peer Review Process

- This page provides detailed information about Peer Review Policies and Practices. For an overview of general information about Peer Review, visit [Peer Review Process](#).

What's New in Peer Review

- [NOT-OD-11-101](#) Resubmission of Applications with Pending Appeals of NIH Initial Peer Review
- [NOT-OD-11-064](#) Appeals of NIH Initial Peer Review
- [NOT-OD-11-047](#) Notice of Change in Policy on the Submission of Reference Forms for Kirschstein-NRSA Fellowships
- [NOT-OD-11-035](#) NIH Policy on Late Submission of Grant Applications
- [NOT-OD-11-023](#) Reminder of Policies Affecting Submission of NIH Grant Applications

Related Resources

Related Archives

- [NIH Peer Review Policies and Practices \(NIH Staff Only\)](#)
- [Rosters of NIH Scientific Review Groups](#)
- [Office of Federal Advisory Committee Policy](#)
 - [Meeting Schedule for all Advisory Councils](#)
 - [More Information about each Council available on IC websites](#)
- [Enhancing Peer Review](#)
- [Peer Review Advisory Council \(PRAC\)](#)
- [Peer Review Notes](#)

<http://grants.nih.gov/grants/peer/peer.htm>

Your application may be reviewed by one of:

Bioengineering Sciences and Technology (BST)

BDMA, BMBI, GDD, ISD, MABS, NANO

Healthcare Delivery and Methodologies (HDM)

BCHI, BMRD, CIHB, CLHP, DIRH, HDEP, HSOD, NRCS, SEIR

Surgical Sciences and Biomedical Imaging and Bioengineering (SBIB)

BMIT-A/B, BTSS, CMIP, MEDI, SAT, F15, various SEPs

Endocrinology, Metabolism, Nutrition and Reproductive Systems (EMNR)

MCE, ICER, CMIR, PN, CADO, IPOD, CIDO, INMP

Immunology (IMM)

CMIA/B, HAI, IHD, III, IMM-M, TTT, VMD

Interdisciplinary Medical Sciences and Training (IMST)

various SEP and training, EBIT

Emerging Technologies and Training in Neuroscience (ETTN)

MNG, NT, F01/2/3, several SEPs

Vascular and Hematology (VH) AICS, ELB, HM, HP, MCH, VCMB

Behavior and Behavioral Processes (BBBP)

APDA, BRLE, CP, CPDD, LCOM, MESH, MFSR

**>200 Standing
Scientific Review
Groups (SRGs or Study
Sections) housed in 24
Integrated Review
Groups at CSR**

Musculoskeletal Oral and Skin Diseases (MOSS)

ACTS, MRS, MTE, ODCS, SBDD, SBSR, SMEP

Infectious Diseases and Microbiology (IDM)

BACP, CRFS, DDR, HIBP, PTHE, PTHE, VB, VIRA/B

Integrative, Functional and Cognitive Neuroscience (IFCN)

AUD, CFS, LAM, NAL, NMB, NNRS, SCS, SMI, SPC

Molecular, Cellular and Developmental Neuroscience (MDCN)

BPNS, CMBG, CMND, DDNS, MNPS, NCF, NDPR, NOMD, NTRC, SYN

Cell Biology (CB)

BVS, NCSD, CMAD, CSRS, DEV1/2, ICI, MBPP, MIST

Brain Disorders and Clinical Neuroscience (BDCN)

ANIE, ASG, BINP, CDIN, CNBT, CNN, CNNT, DBD, DPVS, NPAS, PMDA

Biological Chemistry and Molecular Biophysics (BCMB)

BBM, MSFA/B/D/C/E, SBCEA/B

Risk Prevention and Health Behavior (RPHB)

BMIO, PDRP, PRDP, RPIA, SPIP

Digestive, Kidney and Urological Systems (DKUS)

CIMG, KMBD, GMPB, HBPP, KMBD, PBKD, XNDA, UGPP

Population Science and Epidemiology (PSE)

BGES, CASE, EPIC, IRAP, KNOD, NAME, SSPS

AIDS and AIDS Related Research (AARR)

ACE, ADDT, AIP, AMCB, AOIC, BSCH, BSPH, NAED, VACC

Cardiovascular and Respiratory Sciences (CVRS)

CCHF, CDD, CICS, ESTA, LCMI, LIRR, MIM, RIBT, F10A/B

Genes, Genomes and Genetics (GGG)

MGA/B, GCAT, GVE, GHS, PCMB, TAG

Oncology 1 – Basic Translational (OBT)

CAMP, CE, CG, MONC, TCB, TME, TPM

Oncology 2 – Translational and Clinical (OTC)

BMCT, CBSS, CDP, CII, CONC, DMP, DT, RTB, various SEPs

<http://public.csr.nih.gov/StudySections/Pages/default.aspx>



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Integrated Review Groups

CSR Integrated Review Groups

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Scientific Areas of Integrated Review Groups (IRGs)

For a listing of the Scientific Review Officer and membership roster for each study section, click on the study section roster under the study section name within an IRG listed below or go to the study section index (study sections listed alphabetically) and click on the specified roster next to the name of the study section.

Bioengineering Sciences and Technologies IRG [BST]

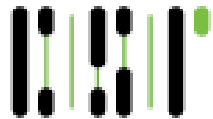
Printer Friendly (Complete IRG)

The Bioengineering Sciences and Technologies [BST] IRG reviews grant applications that focus on fundamental aspects of bioengineering and technology development in the following areas: gene and drug delivery systems, imaging principles for molecules and cells, modeling of biological systems, bioinformatics and computer science, statistics and data management, instrumentation, chips and microarrays, biosensors, and biomaterials. Biological context is important in bioengineering, and a central premise in organization of this IRG is the need for effective review of bioengineering and technology development in early stages before specific practical uses are proven.

Research grants (R01, R21, R15, etc.), Program Project and Center Grants (P01, P41 etc.), and Cooperative Agreements (U01, U54 etc.) are reviewed in the BST IRG.

The following study sections are included within the BST IRG:

- [Instrumentation and Systems Development Study Section \[ISD\]](#)
- [Gene and Drug Delivery Systems Study Section \[GDD\]](#)
- [Biomaterials and Biointerfaces Study Section \[BMBI\]](#)



**Review Group Description:
What is the science focus?**

Biomaterials and Biointerfaces Study Section [BMBI]

[\[BMBI Membership Roster\]](#) [\[BMBI Meeting Rosters\]](#)

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BST - Bioengineering Sciences and Technologies

- [Instrumentation and Systems Development Study Section \[ISD\]](#)
- [Gene and Drug Delivery Systems Study Section \[GDD\]](#)
- [Biomaterials and Biointerfaces Study Section \[BMBI\]](#)
- [Biodata Management and Analysis Study Section \[BDMA\]](#)
- [Modeling and Analysis of Biological Systems Study Section \[MABS\]](#)
- [Nanotechnology Study Section \[NANO\]](#)
- [Bioengineering Sciences and Technologies IRG \[BST\]](#)

The Biomaterials and Biointerfaces Study Section (BMBI) reviews applications concerned with biologically relevant research in materials science and the interaction of materials surfaces with biological systems. Applications driven by bioengineering principles are typical. Areas of interest include the theory, principles, design and synthesis of biomaterials as well as characterization of new or existing materials. BMBI has related interests in the interactions of biomaterials with proteins, membranes, cells, and tissues.

Specific areas covered by BMBI are:

- Development and characterization of biomaterials; Self-assembled materials; Design principles, material processing, and combinatorial approaches to the synthesis of new biomaterials; Biocompatibility, toxicity, structure/property relationships, and biodegradability.
- New biomaterials and fabrication techniques for tissue engineering, transport and perfusion aspects of tissue engineering, and bioreactors.
- Molecular/cellular interfacial interactions; Non-fouling and bioactive surfaces; Improved understanding of the biology-biomaterials interface; Biosurface characterization and technology; Nanoscale characterization at the nano-scale.
- Chip- and micro-array-based microtechnologies and biosensors, with a focus on biocompatibility, nonfouling surfaces, and fouling mechanisms; Including (but not limited to) microfluidic systems), lithographic and microfluidic elements.
- Drug and gene delivery systems and nanoparticles, with a focus on the cellular, material, fabrication, biocompatibility, and toxicity.

Science Focus of “nearest neighbor” study sections

Study sections with most closely related areas of similar science listed in rank order are:

Gene and Drug Delivery Systems (GDD)
Nanotechnology (NANO)
Bioengineering, Technology, and Surgical Sciences (BTSS)
Enabling Bioanalytical and Biophysical Technologies (EBT)
Instrumentation and Systems Development (ISD)

Cover Letters Help Target Your Review

Applicants can suggest

- Review Group assignment
- Expertise necessary for a full and fair review
- Primary (and secondary) Institute or Center (IC) assignment
- Reviewers with potential conflicts
- **Do not suggest possible reviewers, they will be disqualified.**

Other Important Information

- Reasons for a late submission
- Note eligibility for continuous submission
- Highlight this application as one of a set, if applicable
- Acknowledge NIH approval for acceptance of
 - A budget >\$500K/yr
 - Conference grant



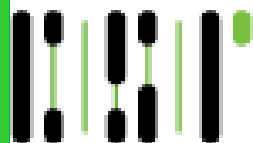
Suggested format and other information at

<http://cms.csr.nih.gov/ResourcesforApplicants/CoverLet.htm>

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scientific review

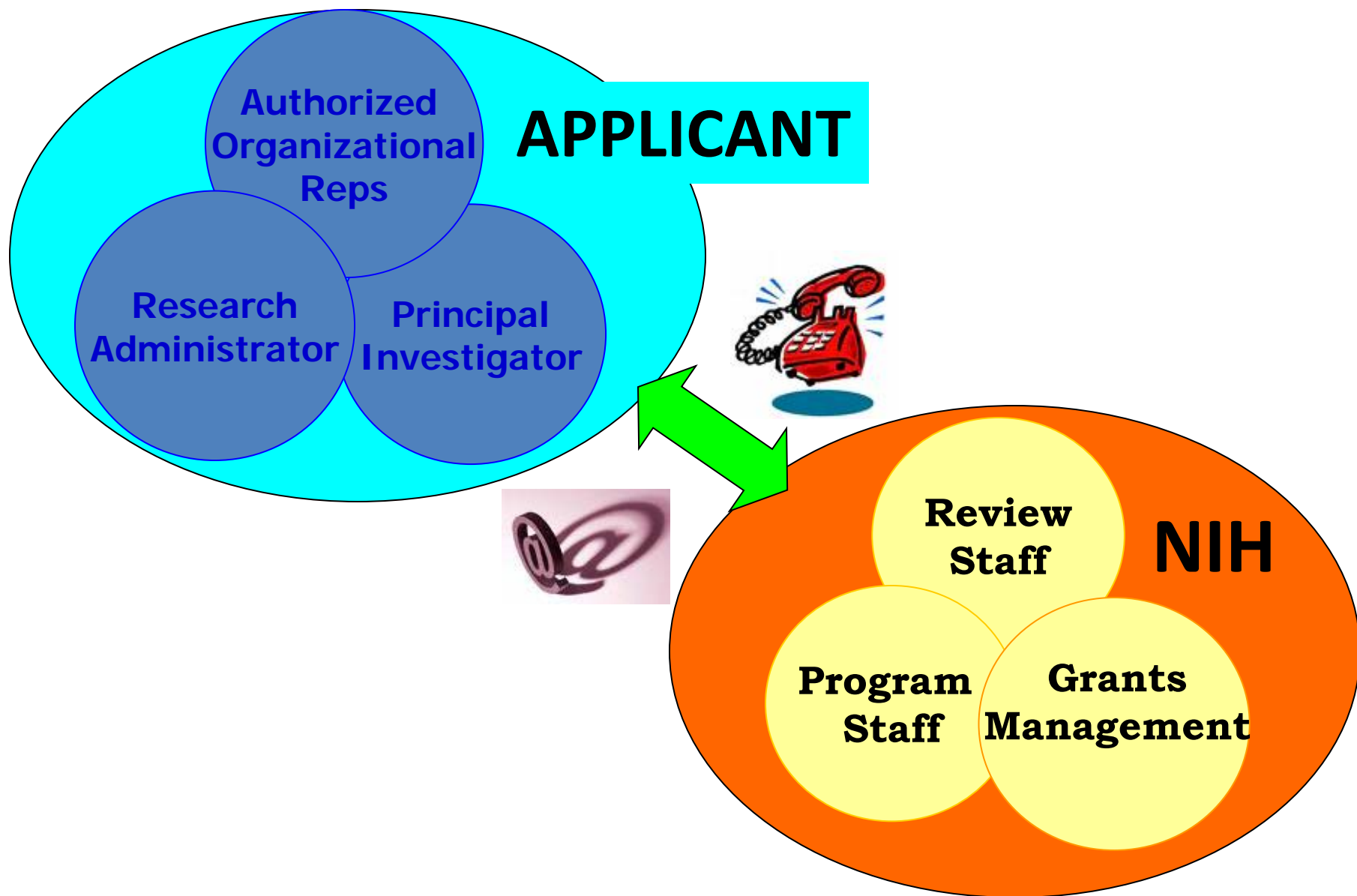
[http://cms.csr.nih.gov/ResourcesforApplicants/
InsidetheNIHGrantReviewProcessVideo.htm](http://cms.csr.nih.gov/ResourcesforApplicants/InsidetheNIHGrantReviewProcessVideo.htm)

Applicant's Vision of NIH Dealing with Grant Proposals...



**Your mission:
Find a Trusted Guide!**

Communication is Key



Need Help with Your Proposal...

Who Ya' Gonna' Call?

✓ about the scientific and technical aspects of your application...

- Find them on the solicitation
- See also the IC's programmatic descriptions (<http://www.nih.gov/icd/index.html>).

✓ for questions during the review...

- Listed on the eRA Commons link to your submitted proposal
- See also the review group rosters at the CSR web site

✓ for help with the business aspects of a proposal...

- Listed on the eRA Commons link to your submitted proposal
- See also the IC's programmatic descriptions (<http://www.nih.gov/icd/index.html>).



**Program
Director**

**Scientific
Review
Officer**

**Grants
Specialist**

Program Officials are your friends!

Pre-Application

- Assess the “fit” to the IC, Program(s)
- Start the conversation early: develop your ideas together
- Choose the right activity/mechanism
- Brief on Review Issues: Dos/Don'ts

Post Review

- Analyze the Summary Statement: deeper insights from the Review
- Understand the rating and assess the likelihood of funding
- BEWARE! Nothing is certain until you have it in writing



During the Award

- Discuss problems in execution (rebuting, rescoping, extensions...)
- Find an administrator to address unusual issues
- Brag about important discoveries

Anytime

- Arrange introductions so you can serve on advisory boards workshop panels, etc. to help set the research agenda
- Discover what's New and Coming Soon in Funding Opportunities



Application

Review



Award

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The Nation's Medical Research Agency

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Offices



The Office of the Director (OD)

The Office of the Director is the central office at NIH for its 27 Institutes and Centers. The OD is responsible for setting policy for NIH and for planning, managing, and coordinating the programs and activities of all the NIH components. OD's program offices include the Office of AIDS Research and the Office of Research on Women's Health, among others. [more >](#)

NIH Institutes



National Cancer Institute (NCI) - Est. 1937

NCI leads a national effort to eliminate the suffering and death due to cancer. Through basic and clinical biomedical research and training, NCI conducts and supports research that will lead to a future in which we can prevent cancer before it starts, identify cancers that do develop at the earliest stage, eliminate cancers through innovative treatment interventions, and biologically control those cancers that we cannot eliminate so they become manageable, chronic diseases. [more >](#)



National Eye Institute (NEI) - Est. 1968

NEI conducts and supports research that helps prevent and treat eye diseases and other disorders of vision. This research leads to sight-saving treatments, reduces visual impairment and blindness, and

www.nih.gov/icd/index.html

Each NIH Institute/Center has a HOME PAGE

NIBIB National Institute of Biomedical Imaging and Bioengineering
National Institutes of Health
ENGINEERING & IMAGING FOR THE FUTURE

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CTC Microchip: A One-in-a-Billion Technology

With enough sensitivity to detect and trap a single at-large cancer cell from among a billion blood cells, the impressive new Circulating Tumor Cell (CTC) microchip is showing much promise as it points the way to a new era in the fight against cancer.



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Model: <http://www.xxxxx.nih.gov>

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RESEARCH

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Biomaterials Program Area

Staff Contact

Rosemarie Hunziker, Ph.D.



Description

This program supports the research and development of new or novel biomaterials that can be used for a broad spectrum of biomedical applications such as implantable devices; tissue engineering; imaging agents; and biosensors and actuators.

Research that is supported includes the design, synthesis, characterization, processing and manufacturing of these materials as well as the design and development of devices constructed of these materials and their clinical performance.

Relevant Study Sections

Biomaterials and Biointerfaces (BMBI)

Bioengineering, Technology and Surgical Sciences (BTSS)

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- [Pharmacology, Physiology, and Biological Chemistry](#)
- [Research Supplements](#)
- [Training Grants](#)
- [Fellowships](#)
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Bioinformatics and Computational Biology

[Bioinformatics and Computational Biology](#)

Karin Remington, Ph.D.

Phone: 301-451-6446

E-mail: remingka@nigms.nih.gov[+ Share](#) [Print](#)

Related Information

[NIGMS Organizational Chart](#)[Essay on NIH Program](#)

Getting to the Top: Writing Great Grants

- Components of successful applications
 - Strong Idea
 - Strong Science
 - Strong Team
 - Strong Presentation
- Match idea/science to the right NIH Institute
 - Every IC has specific mission
- Hone high-quality grant writing skills
 - Articulate the need to capture the opportunity
 - Communicate scientific content compellingly
 - Follow all the instructions



Take Home Messages

Lots of directions and opportunities at the NIH

- **Monitor Institute websites and the NIH Guide** (<http://grants.nih.gov/grants/guide/>)
- **Get to know the Program Director(s) for your scientific area and discuss your ideas**
 - Fit with institute mission and priorities
 - Best grant mechanism or program
 - Best study section for review
- **Participate in workshops and symposia**
 - Get fresh ideas and directions for your research
 - Become known to your peers (i.e. reviewers)
- **Participate in review of grant applications (serve on study sections)**



Path to Success at NIH

Step #1: Do your homework; learn a bit about the grant process and the options.

Office of Extramural Research:

Basics - http://grants.nih.gov/grants/grant_basics.htm

Overview - http://grants.nih.gov/grants/grants_process.htm

IC priorities: <http://www.nih.gov/icd/index.html>

NIH Guide Provides Weekly Updates on Funding Opportunities:

<http://grants.nih.gov/grants/guide/>

NIH RePORTer – lots of statistics and abstracts of funded grants

<http://report.nih.gov/>



**Step #2: Contact us because...
We're from the Government,
we're here to help you!**



**Do science because you can't
imagine doing anything else, and
enjoy the ride. No one said it
would be easy, only wild.**

- Doug Green



Rosemarie Hunziker, PhD

**Program Director, Tissue Engineering/Regenerative
Medicine, Biomaterials and Medical Devices
National Institute of Biomedical Imaging and
Bioengineering (NIBIB)
National Institutes of Health (NIH)**

301-451-1609

Rosemarie.Hunziker@nih.gov

www.nibib.nih.gov

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with the big dogs?**